

9. (ONCE AMENDED) A pointing device comprising:

an operating part;

a detecting part for detecting a movement of said operating part;

a connector part arranged adjacent to said operating part and said detecting part, said connector part being detachably connectable to a data processor and serving to electrically and mechanically support, in a rotatable manner, said operating part and said detecting part relative to the data processor, when said connector part is connected to the data processor.

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CONT.

10. (ONCE AMENDED) A pointing device as set forth in claim 9, further comprising a housing for accommodating said operating part and said detecting part, said connector part being rotatably coupled to said housing.

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Attached hereto is a "Version with Markings to Show Changes Made", comprising a marked-up version of the claims. 37 C.F.R. §1.121 (c)(I)(ii).

## II. REMARKS

### A. Introduction

In this Office Action, claims 1-14 are noted as pending and are rejected.

In summary of this Response, claims 2-4 and 2-14 are canceled, claims 1 and 7-10 are amended, and remarks are provided.

### B. Rejection of Claims 10-11 Under 35 U.S.C. §112, Second Paragraph

These claims are rejected as being indefinite for lacking antecedent basis. Claim 10 has been amended herein to overcome this rejection. Claim 11 does not require any further amendment in this regard.

C. Rejection of Claim 9 Under  
35 U.S.C. §102(b)

This claim is rejected as being anticipated by the Oka reference, U.S. Patent No. 5,049,863. The Examiner cites Oka's pointing device 16 for a male connector 19 received by a female connector 13 on a keyboard 11, or on a laptop.

For the following reasons, it is respectfully submitted that the present invention, as recited by claim 9, was not rendered obvious by Oka.

Claim 9 has been amended herein to recite that the connector part electrically and mechanically supports the operating part and the detecting part relative to the data processor, and such support is in a rotatable manner.

Oka does not disclose or suggest rotating the pointing device relative to the keyboard or laptop. The pointing device 16 of Oka is received on three of its four sides and its base in total contact with the receptacle or "holding section" 15.

D. Rejection of Claims 1 and 7  
Under 35 U.S.C. §§102(b) or 103

These independent claims have been rejected as being anticipated or as being made obvious by Niino, U.S. Patent No. 5,714,980. The Examiner relies upon Fig. 1's elastic member 7 formed between the "operation part" 4 and the "base part" 8, and a fulcrum 9A.

The Examiner acknowledges, however, that this reference fails to disclose, in relation to claim 1, the elastic member as a "plate spring". Nevertheless, the Examiner points to the Niino disclosure indicating that the resilient member can be a leaf spring, which the Examiner considers to be the equivalent of a plate spring.

In light of the following, it is respectfully submitted that the present invention, as recited by amended, independent claims 1 and 7, was not rendered obvious by the cited reference.

Claims 1, 2, 3 and 4 have been combined to recite that the plate spring is one of the structures recited in claims 2/3 or 4, structures not disclosed in Niino.

Further, even assuming one would consider substituting a plate spring for the

type of elastic member or “annular resilient stopper 7” of Niino, the particular plate spring structures recited in amended claim 1, would not be made obvious by the teaching of Niino and/or the knowledge of one ordinary skill in art. In this regard, in page 4, third para., in item 7, of the May 28, 2002 Office Action, the Examiner admits that Niino does not teach the shapes of the plate springs recited by claims 2-4.

In regard to claim 7, the Examiner acknowledges that Niino does not “emphasize” a yoke forming a magnetic path. Nevertheless, Niino is cited for teaching that the “operating part “ 4 can be entirely magnetized.

Even assuming such disclosure would amount to a yoke, amended independent claim 7 recites that the yoke is separate from the magnet, which is not disclosed in Niino. In this regard, yoke 86 of the present invention is wider than, i.e., extends beyond, the magnet 66. It is believed that such extension further helps to minimize the magnetic leakage through the operating part to the exterior thereof, and further helps to direct a magnetic field toward the magneto-electro transducer, more so than the “operating part” 4 of Niino, even if same was entirely magnetized, as suggested by the Examiner.

Claim 7 has been amended to emphasize this difference in widths minimizing the magnetic leakage and directing the magnetic field.

E. Rejection of Claims 1-6  
and 12-14 Under U.S.C. §103

These claims are rejected as being made obvious by a combination of Niino, as discussed above, and May, U.S. Patent No. 4,458,114, which is cited for teaching a plate spring 13, which allegedly would replace the “resilient member” 7 of Niino.

Claims 2-4 and 12-14 have been canceled so no further comments are provided therein. Nevertheless, for the following reasons, it is respectfully submitted that claims 1 and 5-6 were not rendered obvious by the cited combination.

The “plate spring” 13 of May is a relatively continuous member (see the embodiments in Figs. 3, 5 and 6), and the central portion is solid and does not include any opening through which a fulcrum could pass. Accordingly, one of ordinary skill,

upon being aware of the Niino reference and its non-plate like spring resilient member 7, would not be motivated to replace same with a plate spring 13 of May, since Niino's operation requires a fulcrum to extend from an operating part to a base part, which the May plate spring would prevent.

Independent claim 1 has been amended to recite that the plate spring is provided with an opening to receive the fulcrum therethrough.

F. Rejection of Claim 8 under 35 U.S.C. §103

This independent claim is rejected based on a combination of Niino and Burnett, U.S. Patent No. 5,615,083.

Again, it is respectfully submitted that this claim, as amended, was not rendered obvious.

Burnett teaches away from this present invention since it relates to a joy stick which is fixedly mounted to an opening in a laptop surface. That is, the joy stick is not mounted in a rotatable manner. See, for example, column 4, lines 53-64 ("The bracket 152 is formed to fit snuggly in the hole 114 to ensure stability of the joystick...A standard game port plug 153...designed to provide electrical contact with the game port 116 when the joy stick is secured in the hole 114 by the retractable collar 117."); column 5, lines 8-12 ("until the collar 117 snaps into a groove 154 formed in the bracket 152. In addition, the tapered cylinder is keyed to match the receptacle opening in the laptop case so that only one orientation of the joy stick with respect to the laptop is possible. This ensures that correct electrical connection would be made."); and column 5, lines 18-23 ("The interlocking of the groove 154 and the collar 17 prevents the joy stick from moving in the hole vertically, and the tension created by the bracket 152 pressing the segments of the collar 117 open against the biasing springs locks the joy stick 150 into place laterally.").

Claim 8 has been amended to also indicate that the connector part supports the operating part/base part in a rotatable manner "relative to the data processor".

G. Rejection of Claims 10  
and 11 under 35 U.S.C. §103

These claims are rejected as being made obvious by a combination of Oka and Marchis et al., U.S. Patent No. 5,543,821.

The Examiner acknowledges that Oka does not disclose the rotatable coupling of the pointing device housing. Nevertheless, Marchis et al. is cited for showing a rotatable coupling.

Again, for the following reasons, it is respectfully submitted the invention recited by these claims was not obvious.

Marchis et al. has a thumb wheel that allows a clamp 134 to be adjusted so that a track ball can be attached to a laptop. See Figs. 1-3A. The clamp 134 of Marchis et al., which is moveable in and out, would not appear capable of providing any electrical connection between the track ball and the laptop. See for example, Fig. 3A.

Claim 10, of course, depends from claim 9, which as noted above, has been amended to expressly recite that the connector part provides an electrical support and mechanical support.

III. CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that claims 1 and 5-11 are now in condition for allowance.

If there are any additional fees associated with this Response, please charge same to our Deposit Account No. 19-3935.

Finally, if there are any formal matters remaining after this Response, the undersigned would appreciate a telephone conference with the Examiner to attend to these matters.

Respectfully submitted,

STAAS & HALSEY LLP

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9/30/02

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE -  
37 C.F.R. §121(b) and/or (c)**

**IN THE WRITTEND DESCRIPTION**

Please AMEND the written description as follows:

On page 4, the second full paragraph, please amend as follows:

Another object of the present invention is to provide a pointing device having a magneto-electro transducer, in which the magnetic leakage through [a] an operating part is decreased even when the height of the pointing device is reduced.

On page 4, third full paragraph, please amend as follows:

[Further] A further object of the present invention is to provide a pointing device capable of being detachably mounted on a data processor, which can easily perform an electrical connection and mechanical attachment to the data processor and can ensure good portability and a good operational environmental condition of the data processor.

On page 15, first full paragraph, please amend as follows:

It should be appreciated that the plate spring 74 of the pointing device 10 may have various shapes and dimensions other than the above described configuration. As shown in Fig. 6, for example, the adaptable plate spring 74 may include second sections 78', each of which extends in a generally U-shape from the proximal end thereof joined to the first section 76. In this arrangement, each second section 78' is engaged at the distal free end 79 thereof with the flange portion 62 of the holder 48. This modification makes it possible to easily increase the whole length of the second section 78' for exerting a spring action, and thus to obtain a larger spring force.

On page 21, first full paragraph, please amend as follows:

When the pointing device 100 is mounted on the data processor 140, it is also preferred that the connector part 106 is connected to the interface part 148 in a position suitably rotated in the receptacle 128 as shown Fig. 11A, so as to eliminate the interference between the housings 118, 120 of the pointing device 100 and the support

section 150 on the housing body 142, which may be caused [depending on] by the location of the interface part 148 on the housing body 142. Then, the support section 150 is shifted to the projecting position, and the housings 118, 120 are rotated relative to the connector part 106 so as to receive the support section 150 in the engaging section 138. In this manner, the mounting work of the pointing device 100 is completed (Fig. 12).

## IN THE CLAIMS

Please AMEND claims 1 and 7-10 as follows:

1. (ONCE AMENDED) A pointing device comprising:
  - a base part;
  - an operating part supported[, ] on said base part in a rockable manner about a fulcrum;
  - a magnet carried on one of said base part and said operating part;
  - a magneto-electro transducer carried on the other of said base part and said operating part; and
  - an elastic member arranged between said base part and said operating part to elastically push said operating part toward an initial balanced position on said base part, said elastic member being formed as a plate spring provided with an opening to receive the fulcrum therethrough, a first section of said elastic member being engageable with said base part and a second section of said elastic member being engageable with said operating part, said second section being integrally joined to said first section and located to extend around said fulcrum[.],
  - wherein said first section extends annularly around said fulcrum and is fixedly supported on said base part, and said second section extends accurately along said first section to exert a spring action, and
  - wherein said second section includes one of --
    - a distal free end engageable with said operating part and a proximal end integrally joined to said first section at a position remote from said distal free end, and



has a length between said distal end and said proximal end for exerting a spring action,  
and

a distal free end engageable with said operating part and a proximal end  
integrally joined to said first section at a position close to said distal free end, and has a  
generally U-shaped length between said distal end and said proximal end for exerting a  
spring action.

7. (ONCE AMENDED) A pointing device comprising:  
a base part;  
an operating part supported on said base part in a rockable manner about a fulcrum;  
a magnet having a first width and being carried on one of said base part and said operating part;  
a magneto-electro transducer carried on the other of said base part and said operating part;  
an elastic member arranged between said base part and said operating part to elastically push said operating part toward an initial balanced position on said base part;  
and  
a yoke, separate from the magnet, having a width greater than the magnet, and,  
forming a magnetic path, said yoke being arranged in said operating part to at least partially cover said magnet,  
wherein said yoke minimizes magnetic leakage through the operating part to an exterior thereof, and directs a magnetic field toward the magneto-electro transducer.

8. (ONCE AMENDED) A pointing device comprising:  
a base part;  
an operating part supported on said base part in a rockable manner about a fulcrum;  
a magnet carried on one of said base part and said operating part;  
a magneto-electro transducer carried on the other of said base part and said

operating part;

an elastic member arranged between said base part and said operating part to elastically push said operating part toward an initial balanced position on said base part; and

a connector part arranged adjacent to said base part and said operating part, said connector part being detachably connectable to a data processor and serving to electrically and mechanically support, in a rotatable manner, said base part and said operating part relative to the data processor, when said connector part is connected to the data processor.

9. (ONCE AMENDED) A pointing device comprising:

an operating part;

a detecting part for detecting a movement of said operating part;

a connector part arranged adjacent to said operating part and said detecting part, said connector part being detachably connectable to a data processor and serving to electrically and mechanically support, in a rotatable manner, said operating part and said detecting part relative to the data processor, when said connector part is connected to the data processor.

10. (ONCE AMENDED) A pointing device as set forth in claim 9, further comprising a housing for accommodating said operating part and said detecting part, said [connecting] connector part being rotatably coupled to said housing.